To: Prasad, Narendra M[NMPrasad@integrysgroup.com]
From: DelRosario, Ross
Sent: Tue 6/11/2013 6:44:55 PM
Subject: FW: USEPA - North Station oversight summary for 6/3 and 6/4

FYI. Field oversight notes from last week at North Station. See 2 bullets below.

Ross

From: David.Klatt@CH2M.com [mailto:David.Klatt@CH2M.com]
Sent: Thursday, June 06, 2013 5:24 PM
To: DelRosario, Ross
Cc: Erik.Spande@CH2M.com
Subject: RE: USEPA - North Station oversight summary for 6/3 and 6/4

Hi Ross,

Below are notes and observations from this week's North Station field oversight (June 3 and 4). I am on vacation next week through 6/18, so please contact Erik in my absence if you have any questions on North Station. His contact info is below.

A couple noteworthy observations:

- NAPL was identified at NOS-MWW/P-108 from 6.5' to approximately 20' bgs.

- We noted that they collected a sample from fill gravel for chemical analysis in close proximity to actual underlying soil. When gravel fill is so close to actual soil, it is suggested that they use some discretion and sample the soil rather than the stone.

Field sampling was generally conducted in accordance with the SSWP.

Let us know if you have questions.

Thanks,

Dave

David Klatt

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Monday 6/3/2013

•□□□□□□□ **Primary observations for 6/3/2013:**

1. NAPL identified at NOS-MWW/P-108 in the soil (under the fill gravel) from 6.5' to approximately 20' bgs; PID readings above background to approximately 30 ft bgs, and below background from 30 to 40' bgs.

2. Soil sample at NOS-MWW/P-108 was taken from the fill gravel, not the soil under the gravel. VOC, SVOC and perhaps metals results from gravel may not be meaningful.

•□□□□□□□ On site: Jason Brazier/Burns and McDonald (B&M), Al Schmidt (B&M project manager); two Natural Resources Technology staff members (Eric Kananovitz and Mitch Cline); two driller from Geo Services with direct push technology (DPT) rig and support truck; and Juan Luna utility locator from Earth Solutions

•□□□□□□□ Earth Solutions utility location on site and also on Kingsbury Street. Reported that some borings are located over a sewer line, and that there appear to be parallel utility trenches in the street.

•□□□□□□□ All locations completed with DPT, soil sampling only. Soil descriptions provided are generalized based on observations at a distance with some confirmation from B&M

•□□□□□□□ NOS-MWW/P-108 – road gravel/fill to 6.5' bgs, clay to total depth (TD) at 40 ft bgs; thin layers of dark brown to black NAPL observed in seams within the clay at 12', 13', 13', 17.3', 20.8' bgs; high PID of 43.2 at 18' bgs in silty area, next highest 20.8 ppm at 29.9' bgs;

PID readings at 30 to 40' bgs were <1 ppm; did not observe NAPL below 25' bgs.

- Took sample of fill gravel at base of fill gravel section for the soil sample at about 7' bgs.

• NOS-MWW/P-109 – road gravel to ~11' bgs, black to gray clay 11-12.3' bgs, brown to gray clay to TD at 25' bgs; all PID readings are zero

• NOS-MWW/P-110 – gravel/fill to ~6' bgs, clay with silty and sandy zones to 10' bgs (sandy zones wet), clay to TD at 25' bgs; caving of fill gravel in 15-20' interval (e.g. gravel slough in clay); all PID readings zero

• Borings abandoned with bentonite, which was hydrated with water.

• Took representative pictures of soil and DPT operations

Tuesday 6/4/2013

• On site: On site: Jason Brazier/Burns and McDonald (B&M), two Natural Resources Technology staff members (Eric Kananovitz and Mitch Cline); two driller from Geo Services with direct push technology (DPT) rig and support truck

• All locations completed with a CME 75 hollow stem auger (HSA) rig; and borings advanced with 3.5" inner diameter (ID) HSA. Well borings blind drilled immediately proximate to DPT locations completed on 6/3/2013

• Wells constructed of 2-inch diameter schedule 40 PVC, 10-slot screen, with a total 6-inch sump in the bottom (3-inch base plus 3-inch to base of slots, total 6 inches)

• Well pair NOS-MWW/P-109

- NOS-MWW-109 (shallow well) – B&M report the well was completed to 11.3' bgs, with the screen from 5.8 to 10.8' bgs. Sand pack extended to 4.8' bgs. Sealed with bentonite chips (hydrated) and flush mount

- NOS-MWP-109 (deep well) – completed to 28.5' bgs, with screen from 18 to 29' bgs. Sand to 16 ft bgs. Sealed with bentonite chips, and completed as flush mount

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